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ABSTRACT

New information technologies have begun to help librarians transfer their routine procedures and tasks to nonprofessional staff and library users, which allows them to begin to be relieved from the boredom of glorified clerical work. Developments in information technology also allow librarians to see their work from new and different perspectives. The signs of shifting trends are evident everywhere: name changes of library schools; increasing numbers of library school graduates pursuing nontraditional areas of library service; an urgent need to establish a unified concept of information professionals whose identity will be established through education, training, and practice; and a new emphasis on defining minimum competencies of information professionals to be validated by peer review. Education and training requirements can be established by comparing the required competencies in the workplace against those being provided through education and training. As deinstitutionalized information consultants, librarians have an opportunity to market their expert knowledge and skills to people who know the difference. New roles and functions for librarians include information consultants and producers; information gatekeepers and intermediators; end-user educators; managers and leaders; data analysts in data administration centers; preservers of knowledge; and information equalizers. It appears that the role of a client-centered, deinstitutionalized librarian will increase the professional status of librarianship. The private information consultant may serve as a model by which employers and information users can measure the performance of the institutionalized librarians. (THC)

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TRANSFORMING LIBRARIANS

In the beginning, librarians were high priests at the shrine of recorded knowledge. As recorded knowledge explodes, most librarians have degenerated into specialized production workers at processing plants: acquisitions, cataloging and circulation of books. But librarians have consistently maintained a love affair with the book. Even though they could not manage to find time to read, they fell in love with an idea of reading. Consequently, librarians proclaimed that their main task was to bring people and books together. But behind the scene, most librarians have suffered from self-doubt about their professionalism because their work was loaded with clerical routines. And they filled up space of library journals with criticism of library education as well as with doubt of their function as mediators between books and people.

Now information technologies begin to help librarians transfer their routine procedures and tasks to nonprofessional staff and library users. And the automated systems are performing most of housekeeping chores and much of library routines. They are beginning to be unchained from a boredom of "glorified clerical work." And at the same time, they are being offered multiple options to be whatever they wish to be. Librarians begin to see their work from different perspective because of never-ending developments of information technology. They are set free to meet new challenges. The challenge involves "the consistent exercise of discretion and judgement in its performance," Allen B. Veaner (owner of a consulting firm based in Toronto) says. "Today's typical librarian is, at one time or another, contract negotiator, resource allocator, writer, speaker, fund raiser, researcher, research colleague of the patron, subject expert, database searcher, collection builder, budget analyst, proposal writer, statistician, consultant, telecommunications expert, and entrepreneur" [24].

A PASSION FOR BOOKS

Until a generation ago, many book lovers were attracted to

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library schools. Because of their passionate devotion to books, they could not think of themselves as estranged from the world of books and the library; outside the library and without books, they would be just fishes out of water. In early 1960s when the second generation computers brought automatic indexing and automatic abstracting, which was the precursors of today's online systems, Guy R. Lyle believed that one of the main functions of the library was to provide the best recreational reading and to use every skill, every bit of imagination, and every artifice to entice our reading public to enjoy themselves [17].

This line of thought is continued by Wil Manley (director of the Temple Public Library in Arizona). Says Manley [19]: "Increasing access to collections, enhancing resource-sharing, and recording, tabulating, and processing all our circulation transactions, automation has freed us from time-consuming busywork and has given us the potential to concentrate renewed attention to our primary and humanistic responsibility of facing and serving the public in our daily function of bringing people and books together." And he continues [18]: "Computers have made the concept of the print-only library more workable and therefore more valuable than ever before, from the standpoint of accessibility and bibliographic and circulation control." Thus he suggests that libraries should dedicate all their material budgets to books, periodicals, and other print materials. The reason, according to him: "Books, simply stated, constitute the only reason that we exist."

Although Manley sounds anachronistic, it is quite possible that the library equipped primarily with print materials may survive in the world of electronic texts and online delivery of information. At this point, it is not clear whether the library will maintain its independence or will be incorporated into local bookstores or print shops that provide hardcopies from electronic texts. It is possible that the library full of books will continue to satisfy people who want other than instantly delivered information. But here librarians will have to be content to anonymously provide readers with "a place for the soft rustle of pages and the quiet stir of thought."

DRIFTING AWAY FROM A STRONG FEELING FOR BOOKS

Thomas R. Adams (professor of bibliography and university bibliographer, Brown University) deplores that books are becoming incidental to librarians [1]. "As long as information and books were embodied in the same object," Adams says, "books received the full benefit of the librarian's attention." He continues: "For years the information contained in a book and the book itself were treated as inseparable. That unity has now been shattered, and in the process something fundamental in the librarian's responsibilities has emerged in full view... Their first responsibility is the control of information."

The signs of this shifting trends are evident everywhere -- from name change of library schools to admission requirements. In

1970, five out of 43 library schools accredited by the American Library Association included the word "information" in their names. That number jumped to 23 by February, 1980. Again in 1984, the number almost doubled -- 41 out of 69 schools, which is a dramatic increase in four years. And at the same time library schools have attracted students with talents and skills different from what they had with a generation ago. Fifty percent of all students at 69 library schools had previous computer programming [24]. Some schools are leading; at 14 schools, 100 percent of the students already had a background in computer programming. Recently, the transition is officially recognized by UCLA Library School which stipulates computer programming as one of admission requirements.

And almost 30 percent of 1982 graduates went into nontraditional areas of library service. Robert D. Stueart (Dean of the Graduate School of Library and Information Science, Simmons College) [21] observes that the nontraditional settings begin to attract the brightest and the most innovative individuals. The new breed of librarians perceive traditional libraries today as rigid and hierarchically stifling; they are searching for opportunities for self-expression, for implementing their own ideas and for innovative change, according to Stueart.

Clearly, bookish disposition is no longer desirable. The humanistically oriented librarians are either not getting ahead in the library profession or getting out of the profession altogether, according to Manley [19]. He says: "It's the technocrats, the professional managers with MBAs, MPAs, or computer degrees who are now unfortunately moving up the ladder, calling the local shots, and populating library director meetings and regional conferences." These new breed of librarians appears to Manley that, although they know all about processes and systems of delivering information and providing access, they have absolutely no vision about the information they should be delivering or the books to which they are providing access. Many traditional librarians suspect that new librarians are depossessed of old traditional passion for books. But it appears that, in general, new librarians have additional qualities, rather than instead of. They are as much inquisitive about new ideas as bookish colleague. The difference is that they handle more and more with electronic format.

HINDRANCES TO THE PROFESSIONALIZATION OF LIBRARIANSHIP

For time, books have represented knowledge of which beauty is well savored by both librarians and scholars. Some library users find knowledge more enticing when it is well hidden in stacks of books. And they appreciate the value of books more when they find books serendipitiously. Although an image of the librarian is unimposing in such process of access to knowledge, librarians have hoped their passion for books would be rewarded.

Thus, being shackled by books within four-walled library, librarians have fermented their dissatisfaction with their jobs

for many years. They quickly realized that they could not sustain a strong feeling for an idea of reading because of the low esteem their patrons accord. A majority have felt trapped in a routine work, playing a menial role. And they say they cannot get any intellectual stimulation just by playing facilitators, not evaluators of books and information.

Occasionally, they get a shot of a positive attitude by their colleague, a proponent of which group is David Isaacson (Western Michigan University Library)[14]. He vehemently expounds that an attempt to make a distinction between working with books as tools and books as means of achieving knowledge and information is a false dichotomy. The distinction is, he says, "to further the still too prevalent image of the librarian as a clerk, rather than a professional." He does not believe that the librarian's responsibility is simply to show patrons how to find information, not to interpret that information for them. He says: "Each choice, however simple, of a subject heading in the catalog; each choice, however routine, of one reference book over another, is an act of judgement, an interpretation that requires intellectual skill." And he believes: "the librarian who regards these decisions merely as routine may as well be working in a grocery store."

On the whole, there are many librarians who constantly doubt about whether they are really professionals at all. Thus, they feel insecure with their patrons and among themselves. Their traditional mode of practice -- the anonymous relationship with the public -- has served as a cover for their insecurity as well as the incompetent members. Joan C. Durrance (School of Library Science, University of Michigan)[10] says that "Librarianship's low status as a profession, attributed in some measure to the fact that it is a female-dominated profession, may actually result from the fact that it is practiced anonymously." The reason: "professional anonymity interferes with an integral part of the librarian-client relationship--the common communication process." Durrance finds that an information seeker "who knew the name of a librarian was twice as likely to have a high success rate." She says: "It also showed that (s)he was more than five times as likely to consider the public library to be an important information center."

And at the same time, many people begin to realize that threats to the professionalization is the librarian him- or herself who has done little for his or her own self-development. "Too many people are perfectly content to continue what they are doing the way they are doing it for the rest of their professional lives," says Stueart. "Too many have had one year of experience repeated 15 times rather than 15 years of experience." Although many other professionals as well lack the up-to-date knowledge or skills necessary to maintian effective performance in current or future roles, some librarianship has been hampered by the fact that the profession attracted and, worse yet, retained people who crave security and status quo, according to Stewart.

Another deadly threats to professionalization is that librarianship has not yet reached a sufficient level of consensus about its defining characteristics and its knowledge base. Says Isaacson: "Part of the frustration, but also the challenge, of being librarian is that we have not yet established a secure identity either with the public or among ourselves." Precisely for these reasons, Pauline Wilson argues that ALA's support of the MLS degree as a minimum requirement for professional employment cannot be effectively defended [26]. Careless criticism of library education and librarianship leads one to believe that there is nothing special that needs to be learned about libraries and library service. Wilson says, "perhaps general knowledge, good sense, and on-the-job training are sufficient."

Furthermore, information technologies have began to shake old assumptions about books and librarianship. Books are no longer efficient medium for information delivery. And libraries as institutionalized storage of recorded knowledge can no longer pose as attractive and effective access points for an increasing number of people who are willing to pay a high premium for information. The role and functions of the library will be seriously questioned unless librarians define their new role, responding to the changing needs of people who generate, store, and access information by different procedures.

In this new information environment, "a nucleus of well qualified, competent information professionals" is needed. Consequently, there is a urgent need to establish a unified concept of information professionals whose identity has to be definitely established through education, training and practice. This need will be probably satisfied by the study on "New Directions for Library and Information Science Education" conducted by King Research, Inc., under contract from the Department of Education.

COMPETENCIES OF INFORMATION PROFESSIONALS

The study was "set out to develop lists of current and future competency requirements of librarians and other information professionals," according to Jose-Marie Griffiths (director of project study) and Donald W. King (King Research) [13]. Initially, the announcement of the project study aroused mixed feelings in the library community. Herbert S. White (dean of the Indiana University School of Library and Information Science, Bloomington)[25] is suspicious of its intent; he says that "defining minimum competencies means that jobs can be filled more cheaply, as the Office of Pesonnel Management [OPM] has already discovered" in ranking federal librarians. He sees the minimum competencies as attempt to adapt standards to people who are already in libraries but who cannot meet higher standards, by ridiculing earlier standards as idealistic or unrealistic. "If basic skills are determined by asking professional librarians what they do," White says, "self-fulfilling prophecies and the automatic downward validation of the profession... may occur."

The reason, according to White: What professional librarians do, to a large extent, is clerical work, not because they want it that way, but because they are not assigned enough clerical support and because clerical duties take precedence over professional duties in the organizational setting of today's library.

To this, Robert M. Hayes (dean of the Unversity of California at L.A. Library School and chair of the Advisory Committee to the project) [7] responds that (1) the project has nothing to do with OPM and was generated by the Department of Education in response to discussions with a number of persons in librarianship and library education over a period of at least two years; (2) competencies were defined in terms of future needs, not today's "needed basic skills."

An editor's note in AMERICAN LIBRARIES: "We believe this project, which addresses emerging as well as traditional forms of work and education, has come none too soon for a profession not only challenged, but bewildered and threatened by shifting patterns of information needs and services."

Since it is intented to help determine "New Directions in Library and Information Science," it will "provide information to educational institutions, employers, professional societies and information professionals to help them improve the capabilities of the profession" [11]. The first objective of the study is to identify and validate competencies, and the next objective is to ensure that the successive developments of future competencies reflect the dynamic nature of the information environment.

The competencies are the base upon which information professionals require substantial capabilities to perform at the high level. "The term 'competence' can be interpreted in the very narrow sense used by those concerned with the validation of educational requirements for employment," Hayes says [7]. The competencies are comprised of three components: knowledge, skills and attitudes. Thus competent information professionals are expected to acquire (1) several types of knowledge, (2) three kinds of skills to use one's knowledge effectively, and (3) professional attitudes that are extremely important to work performance.

The types of knowledge include:
(1) knowledge of subject areas of users served;
(2) knowledge of library and information science;
(3) knowledge of parent organization or user community served;
(4) knowledge about information work environment;
(5) knowledge of work methodology, e.g., how to apply techniques, use technology, etc.

To use the above knowledges effectively, information professionals have to achieve such skills as abilities to conduct reference interview, to evaluate research outputs, to manage time effectively, to design systems and procedures to improve library

operations, to budget and anticipate long-range needs of library, etc.

Although such knowledge and skills do not appear to be strikingly different from the traditional librarian's and they are not likely to provide new dimensions to librarianship, the project study is very significant in that it included attitudes of information professionals as extremely important components of competencies. Attitudes cover three distinctive areas: disposition, personality traits, and work-related externalities.

(1) The professional's disposition is expected to be positive toward one's profession, the organization served, users and coworkers.
(2) Personality traits and qualities include confidence, inquisitiveness, sense of ethics, tenacity, imagination, need for achievement, etc.
(3) Information professionals should develop such attitudes related to job/work/organization as willingness to accept responsibility, willingness to up to date through professional reading, ability to see broad picture, variety of interest, and so forth.

Likewise, the project study stresses that "any formal education should place a premium on conveying a sense of professionalism and the importance of attitudes in achieving satisfactory job performance" [13].

Obviously the above knowledges, skills, and attitudes are acquired through formal education and experience or on-the-job training. Largely through on-the-job training and experience, information professionals can acquire skills, attitudes, and some of the knowledges, e.g., how-to knowledges, knowledges of the organization and community served. Through formal education and experience, librarians can acquire the following knowledges: (1) primary subject knowledge of users served, (2) knowledge of information structure and formats as well as its definition, (3) knowledge of information organization, (4) knowledge of information retrieval, (5) knowledge of information management, (6) knowledge of information technologies and their applications, (7) knowledge of research in the field and its applicability to practice.

This list of competencies is to be validated by peer review process. The advisory Group and several hundred information professionals, selected by the King Research, are involved in determining whether the list covers all aspects of competencies; which competencies are essential, desirable, etc; and which competencies are most likely to change, and how. After the final validation of the competency list, the information profession will have at least a guideline for educational preparation, qualifications, practice, and measurement of their performance, on which educators, practitioners and employers might have agreed. Although the validated list of competencies is not likely to help librarians immediately unburden their clerical work,

employers will have at least a means to measure how much they are wasting the professional librarian's talent, exactly what they can expect from the information professional, and what kind of educational preparation they have to demand, what skills they have to train the new hire on the job.

The validated list will help information professionals make linkages between education, training and experience. Thus, the project study intends to demonstrate the relationships between competencies and activities, and between activities and output performance measures. Acquisition of the defined competencies will result in improved performance of information professionals, where performance is measured in terms of productivity, quality, and timeliness. Therefore, expenditure made to improve education and training can be justified in terms of improved competencies, performance, effectiveness and higher order effects. "Furthermore," say Griffiths and King, "we feel that it is useful to also provide examples of performance measures which correspond to the activities to help illustrate how performance might be affected by professional competencies."

And it will also help one draw a line between the formal education and training, which has been made blurred often by librarian themselves as well as employers. White says that "part of our difficulty comes from our failure to differentiate between education and training, even though there is a vast difference." The difference is that education prepares one to accept a professional job while the role of training is to prepare one to perform it. "Education precedes training and can be acquired in a limited number of ways," says White. "Training occurs frequently on the job and through seminars, workshops, and others, but rarely through formal degree programs." Although such distinction has been understood in the fields of medicine and law and in most other fields, any attempt to make the distinction, in the field of librarianship, has been "subverted by pragmatism." Furthermore, practitioners of librarianship expect educators to train, not necessarily educate, new hires. "In librarianship," says White, "we somehow expect to hire people at 9 a.m., send them through personnel indoctrination, and turn them loose on the backlog at 10 a.m. If that is what we all want, then basic competencies are relatively easily acquired. However, we may then be dealing with not a profession but a trade, even if a skilled trade."

Now with help of the validated list, "one can establish education and training requirements by comparing the required competencies in the workplace against those being provided through education and training." Griffiths and King say [12]: "The educational requirements would indicate which validated competencies might be achieved through formal education (e.g., subject knowledge in undergraduate courses and information organization and control knowledges in library graduate courses), through continuing education programs (e.g., knowledge of management method and new technology) or training on the job (e.g., knowledge of the specific workplace and community served, and skills applied to

reference activities). All of this, of course, assumes that we know which competencies are being taught and acquired in universities, continuing education programs and on the job."

Even though a board of a small library district adopt the list as a policy for hiring and evaluating their professional librarians, the board will have some difficulty, for practical and political reasons, in determining whether it is much better to promote an experienced clerk to librarian or to hire new library school graduate. One reason for being easily "subverted by pragmatism" is that many clients cannot easily tell a difference between qualified librarians from unqualified ones. Most of their clients have rarely experienced that information can solve their serious problems the way a good surgeon can save their life. Thus, the librarian's services have not been distinctively tangible enough for clients to make a difference between a librarian and an experienced clerk. This has been one of the librarian's vulnerability.

ROLES AND FUNCTIONS

Now librarians have an opportunity to escape from the vulnerability. They, as deinstitutionalized information consultants, have an opportunity to market their expert knowledge and skills to people who know the difference. When their services can be measured quantatively in terms of the price their clients have to pay, they have much chance to earn professionalism.

(1) information consultants and information producers. Anywhere outside the library at any time, librarians now can perform most of their traditional functions. Lancaster calls these librarians "de-institutionalized" librarians [16]. They rely on more computers and telecommunications networks than books and the library. The information consultant is a paradigm of the transformed librarian, whose future is promising. "The pursuit and processing of information will become increasingly important throughout all segments of society," says Lancaster. "An 'information skilled populace' will be needed to implement and exploit new technologies applied to all aspects of human endeavor." Lancaster believes that information specialists will be demanded, in the shorter term, much beyond the time when the library, as a service institution, has ceased to exist, although eventually their services will be bypassed. In order to survive, information professionals have to be specialized in terms of the subject matter they deal with. They are expected to analyze the information they retrieved and to submit the evaluated results to the requestor. "The information specialist then, is essentially an information consultant," says Lancaster.

It appears that the role of a client-centered, deinstitutionalized librarian will increase the professional status of librarianship. The private information consultant may serve as a model by which employers and the information users can measure the performance of the institutionalized librarians. Employers have to pay their librarians as much as private

practitioners can make.

Meanwhile, institutionalized librarians should have as much, if not more, colleague contact as client contact, if they are concerned with the development of the profession as a whole, according to Michael F. Winter (librarian at Unity Medical Center in Fridley, MN)[27] "Indeed," Winter says, "with professional groups generally, higher status workers seem almost totally removed from clients, and this is as true in librarianship as elsewhere." To achieve the professional competence, Winter suggests, librarians "participate as much as possible in the process of producing and disseminating knowledge itself, through a commitment to specialized areas of knowledge and their relationships within human knowledge as a whole."

(2) Information gatekeeper and intermediator.
At the initial developmental stage of databased online searching, clients need intermediaries especially when endusers are paying for information by the meter ticking at every second. And database publishers directed their products to librarians who can intermediate online searching for their patrons. The reasons: (1) the cost of accessing electronic information is prohibitively high to individual users (endusers); (2) Since software was unsophisticated, accessing and retrieval of information requires a combination of complex commands and a familiarity with databases.

On the other hand, some people feel that the information intermediary will survive only in the short term. They see that the development of retrieval by natural language will completely obliterate professional intermediation. And at the same time, publishers begin to market online information directly to professionals and business executives as well as millions of microcomputer owners. Their future vision is that every educated individuals are able to have online access directly to all recorded knowledge as well as current data at decreasing cost through economies of scale.

As more and more databases are available, however, endusers are increasingly having difficulty in choosing the right source. Although a certain number of endusers will completely self-sufficient, most endusers need more than ever the assistance of a librarian who knows which databases are most appropriate and cost-efficient. For this and economic reason, scientists, lawyers, medical practitioners, and other professionals tend to delegate searching to librarians. Unless they consider the searching activities as part of research or as a way of getting new idea in research process, endusers will allocate the time required for searching activities to librarians. "It seems to me that these activities are going to become more important," says King [8]. "In those organizations that now have sophisticated end users and state-of-the-art systems, the role of the intermediary has actually become greater. This, to me, is an indication of what will happen in the future when users become even more sophisticated and systems become more advanced." And more people

perceive that such introduction of user-friendly microcomputers and proliferation of databases actually help librarians do their traditional job easier and allow them to go for the next challenge.

From the beginning stage of databased online searching, T.C. Bearman (Executive Director of National Commisssion on Libraries and Information Science)[5] observes that the business press is filled with articles about the need for skilled information workers and the growth of the industry. Consequently, according to Bearman, information profession is being seen as a profession similar to law and medicine, partially because of the growing awareness of the importance of information in today's world, publicized through the media.

As the intermediary role is getting important, the librarian's gatekeeping activities -- choosing a database and evaluating information source -- will be more visible. Thus, Kathleen M. Nichols (freelance information specialist in Vancouver, B.C.)[20] believes that librarians will more often be the source of "hard" data instead of being purveyors of "soft" bibliographic information. This opens up possibilities for librarians to analyze or synthesize information, to repackage information on demand, to write report, to do brokering and consulting, and to educate endusers.

(3) Educating endusers.
As a result of database proliferation, librarian's educational function will continue. Librarians will have to introduce endusers to numerous databases and train them in their use. Unlike other professionals whose occupational structure is based on the monopolization of a specific social service and the knowledge upon which their profession is based, librarians help their clients become self-reliant. According to William F. Birdsall (university librarian at Dalhousie University in Halifax, Nova Scotia, Canada)[6], librarianship responds simply to the emergence of a self-service society requiring a new kind of professionals. Birdsall says that librarianship belong to this new type of profession whose attributes are more in tune with our changing society. The emerging professions are semiprofessions that have little chance of attaining the full professional status of the recognized professions. Librarianship belongs to this group, according to Birdsall.

On the other hand, Hugh C. Atkinson (university librarian at the University of Illinois at Urbana-Champaign)[2] believes that the self-sufficient client help librarians explore new challenge. For the last 50 to 100 years, librarians have consistently transferred tasks and procedures formerly performed by themselves to nonprofessional staff and from them to patrons, according to Atkinson [2]. This is in sharp contrast to the other professionals to whom patrons are expected to return for any recurring problems.

"The next new challenge for librarians will be that of the nonbibliographic machine readable data," Atkinson says [3]. "This

data requires not only skills of searching and analysis, but also a second level of skills required to add programs and systems to manipulate the aggregate data. Thus not only must a file be found and searched, but analytic program or statistical program must be searched for, selected, and applied to the data."

The functions of searching and educating need not be done by in-house librarians. This choice opens up opportunities for consultancy services, which is the highest status of information professionalism.

(4) Managers and leaders.
Academic librarians must have different qualifications, according to Patricia Battin (university librarian at Columbia University) [4]. Rather than autonomous professionals specialized either in academic subject disciplines or within the academic library, Battin says: "we need people who have been trained to question assumptions, collect data, resolve conflicts, make informed judgements, and take decisive action." And she adds: "Academic librarianship is an aggregate of professions and librarians must be multiliterate."

And she believes that the quality of the library staff during the next decade will be more important to the future health and vitality of the university than the quality of the instructional and administrative staff. The reason: the quality of librarians will largely determine the capacity of the university to provide, on an affordable and continuing basis, the scholarly information systems necessary to support its research and instructional programs. Thus, academic librarians have to be prepared to make a strong intellectual commitment at the beginning of the graduate program, and to conscientiously and systematically educate themselves for those clearly perceived responsibities and the professional challenges ahead.

(5) Data analysts in the data administration center.
Michael E.D. Koenig (professor at the School of Library Service, Columbia University)[15] suggests that librarians are far better qualified to data administration analysts than the typical applications programmer. The reasons he illustrates are: (a) Librarians are skilled in "eliciting what the customers' information needs are, what information they use in conducting their operations and making decisions, and what information they would find useful if it were available." (b) The librarian's "bag of tricks" is "to make optimal use of the data dictionary/directory (DD/D), which is increasingly recognized as the central tool of data administration." Data administrator's "tools and techniques used for controlling and administering a DD/D, such as KWIC and indexes, have been taken from the librarian's armamentarium."

(6) Preservers.
Many people see that the library's role as a repository of knowledge will continue. Although no one library can commit itself to the collection and conservation of all recorded

knowledges, an individual library continue to collect and preserve information based on its own patrons' need. But, with the advent of online information and telecommunications network, librarians are shifting their emphasis from collection to access and service. Nonetheless, they will continue their curatorial responsibilities for disks, tapes and other media that store information electronically. Librarians are more likely to transfer this role to paraprofessionals -- managers of information media.

(7) Social role as the information equalizer.
This function will be reemphasized as long as the gap between "information rich" and "information poor" are widening. An information welfare system is suggested by Tom Surprenant (Graduate Library School, Univ. of Rhode Island, Kingston) [22]: 'Librarians must come up with alternative ways to handle the problem of electronic services for the information poor. We must develop programs to provide information services to them even in the face of high costs. We have to take advantage of the electronic technology to meet all of the information needs of our clientele, regardless of their ability to pay. One option is the creation and use of 'information stamps,' [of which a model is the food stamp program] .. In this way we will be making a major contribution to the quality of life of a large segment of the culture and enhancing the importance of library services in the new electronic society."

Blaise Cronin (Aslib Research and Consultancy)[9] believes that the library profession is likely to loose a significant portion of its traditional user community, i.e., "the informationally independent segments of society" and that "the institutional information provider will become an extinct species." And he says that the social trend may inspire a section of the profession to reformulate its mission statements, refine its goals, and at the same time new justifications for public or corporate subsidy. A new role is a public watchdog and access facilitator for the information poor. This role "entails a belief in and understanding of the importance of information and the freedom of its use by every mind, according to John C. Swan (chair-elect of the ALA Intellectual Freedom Round Table)[23]. And he believe that this commitment. this sense of mission, can transform the librarian's credibility as competent functionaries into power to command attention as professionals whose domain is the foundation of a free society.

But this role is not likely to be enhanced in the future. The ever increasing sophistication and yet decreasing cost of information technologies make electronic information more easier to use and less costlier than paper-based information. Currently, more public libraries are succeeding in providing free online information to their patrons. Simply by managing technologies effectively, institutionalized librarians can provide more than lip service to the "have-nots" and at the same time can compete with newly emerging information industries. Eventually, institutionalized libraries, with their limitations, will find

their own niche to satisfy the information needs of the general populace. While each library will define its own mission, each will have to rely on other libraries or private information suppliers. No one library can be all things to all people. Consequently, most people will use several types of libraries and/or information brokers to satisfy their information needs.

Fundamentally, the librarian's role and functions will not be drastically transformed. They simply come to have an additional option to escape from four-walled security and stratified bureaucracy to another world in which risk-taking, innovation, and creativity are necessary for successs. This group alone will be able to accelerate the professionalization of librarianship.

REFERENCES

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1. Adams, Thomas R. "Librarians As Enemies of Books??" COLLEGE & RESEARCH LIBRARIES. 5/84, p196-206.
2. Atkinson, Hugh C. "Two Reactions to Change." LIBRARY JOURNAL. 8/84, p1426-27.
3. Atkinson, Hugh C. "Who Will Run and Use Libraries? How?" LIBRARY JOURNAL. 10/15/84, p1905-07.
4. Battin, Patricia. "Developing University and Research Library Professionals: A Director's Perspective." AMERICAN LIBRARIES. 1/83, p22-5.
5. Bearman, Toni Carbo. "The Changing Role of the Information Professional." LIBRARY TRENDS. Winter, 1984, p.255-60.
6. Birdsall, William F. "Librarianship, Professionalism, & Social Change." LIBRARY JOURNAL. 2/1/82, p223-26.
7. Clemmins, Edward T.; Fake, Elizabeth C. "The State of the Society and the Profession." BULLETIN OF THE ASIS. 10/84, p15-8.
8. "Competency Controversy: King Study Advisor Responds to White." AMERICAN LIBRARIES. 12/83, p706.
9. Cronin, Blaise. "Adaption, Extinction or Genetic Drift?" ASLIB PROCEEDINGS. 6-7/83, p278-89.
10. Durrance, Joan C. "The Generic Librarian: Anonymity versus Accountability." RQ. Spring 1983, p278-83.
11. Griffiths, Jose-Marie. "Our Competencies Defined: A Progress Report and Sampling." AMERICAN LIBRARIES. 1/84, p43-5.
12. Griffiths, Jose-Marie; King, Donald W. "Educating the Information Professional of the Future." In 1984: CHALLENGES TO AN INFORMATION SOCIETY: Proceedings of the 47th ASIS Annual Meeting; 1984 October 21-25; Philadelphia, PA. White Plains: Knowledge Industry Pubs.; 1984.
13. ---- "A Framework for Describing Information Professional Competencies." Washing, DC: King Research, 1984
14. Isaacson, David. "Anti-intellectualism in American Libraries." LIBRARY JOURNAL. 2/1/82, p227-32.
15. Koenig, Michael E.D. "Librarians: The Untapped Resource." (Readers' Forum.) DATAMATION. 9/83, p243-44.
16. Lancaster, F.W. "Future Librarianship: Preparing for an Unconventional Career." WILSON LIBRARY BULLETIN. 5/83, p.747-53.

17. Lyle, Guy R. THE LIBRARIAN'S ROLE IN SOCIETY -- THE CHALLENGE. Sixth annual Mary C. Richardson Lecture, May 3, 1963. Geneseo, NY: State University College at Geneseo, Div of Library Education, 1963. 17p.
18. Manley, Will. "Facing the Public." WILSON LIBRARY BULLETIN. 10/84, p124-25.
19. ---- "Facing the Public." WILSON LIBRARY BULLETIN. 12/84, p270-71.
20. Nichol, Kathleen M. "Database Proliferation: Implications for Librarians." SPECIAL LIBRARIES. 4/83, p110-18.
21. Stueart, Robert D. "Preparing Libraries for Change." LIBRARY JOURNAL. 9/15/84, p1724-26.
22. Surprenant, Tom. "Future Libraries." WILSON LIBRARY BULLETIN 4/84, p574-75.
23. Swan, John C. "Winston The Librarian." LIBRARY JOURNAL. 11/1/84, p1993-98.
24. Veaner, Allen B. "Librarians: The Next Generation." LIBRARY JOURNAL. 4/1/84, p623-25.
25. White, Herbert S. "Defining Basic Competencies." AMERICAN LIBRARIES. 9/83, p519-25.
26. Wilson, Pauline. "ALA, the MLS, and Professional Employment: An Observer's Field Guide to the Issues." AMERICAN LIBRARIES. 9/84, p563-66.
27. Winter, Michael F. The Professionalization of Librarianship. Urbana, Il.: Graduate School of Library and Information Science, University of Illinois, 1983. 46p. (Occasional papers , number 160, JUly 1983).

NOTABLE BOOKS

Gerrie, Brenda. ONLINE INFORMATION SYSTEMS: USE AND OPERATING CHARACTERISTICS, LIMITATIONS, AND DESIGN ALTERNATIVES. Arlington, VA: Information Resources Press, 1983. xii + 189p. $24.50 plus $2.10 for postage and handling.

Amazingly without any discussion of hardware or software, Gerrie succeeded in presenting a comprehensive picture of online retrieval systems as it is. A undercurrent concept of this book is that online information systems should be used with full understanding that the systems contain all of the dangers and pitfalls of traditional information retrieval systems. With this recognition of the limitations of current retrieval systems, the author provides the reader, who is assumed to have a minimum knowledge of information retrieval systems, with excellent analyses of the component parts of online information retrieval systems: documents and queries as inputs, the file structures, the retrieval process, the search strategies, and the search process. In the final analysis, the author confirms that a client is really seeking a minimum amount of information rather than high recall of relevant information, to solve a problem. Although this book discuss the concepts rather than the mechanical how-to of the retrieval systems, designers and operators of database

publishers will get valuable information to assess and improve the currently available systems.

TELECOMMUNICATIONS SYSTEMS AND SERVICES DIRECTORY. First edition. Ed. by John Schmittroth, Jr. and Martin Connors. Detroit, MI: Gale Research Co., 1984. 3 parts. $170.

Subtitle says all about the scope and contents of this three-volume directory: An international descriptive guide to new and established telecommunications organizations, systems, and services, covering voice and data communications, teleconferencing, electronic mail, local area networks, satellite services, videotex and teletext, interactive cable television, transactional services, telegram, telex, facsimile, and others, including related consultants, associations, research institutes, publishers and information services, and regulatory bodies, with a detailed glossary of terms, acronyms, standards, and issues in the field.

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